ABSTRAK

Fitria Ayu Wulandari. **ANALISIS KESALAHAN DALAM MENYELESAIKAN SOAL POKOK BAHASAN GAYA DAN HUKUM NEWTON SISWA KELAS VIII SMP AL HADI TAHUN PELAJARAN 2013/2014**. Skripsi, Fakultas Keguruan dan Ilmu Pendidikan.Universitas Sebelas Maret Surakarta. April. 2016

Penelitian ini bertujuan untuk mendeskripsikan: (1) jenis-jenis kesalahan yang dilakukan siswa kelas VIII SMP Al Hadi dalam menyelesaikan soal-soal pada materi Gaya dan Hukum Newton, (2) faktor-faktor yang menjadi penyebab siswa kelas VIII SMP Al Hadi melakukan kesalahan dalam menyelesaikan soal-soal pada materi Gaya dan Hukum Newton.

Penelitian ini termasuk jenis penelitian deskriptif kualitatif. Penelitian dilaksanakan di SMP Al Hadi. Subjek penelitian yang dipilih adalah siswa kelas VIII A dan VIII E yang masing-masing kelas terdiri dari 26 siswa. Teknik sampling yang digunakan adalah *purposive sampling*. Teknik pengumpulan data yang digunakan adalah teknik observasi, tes, dan wawancara. Validitas data dilakukan dengan triangulasi data, yaitu dengan membandingkan antara data hasil observasi kegiatan, data jawaban soal tes, dan data hasil wawancara dengan beberapa siswa.

Berdasarkan analisis data dapat disimpulkan: jenis kesalahan dan penyebab kesalahan yang dilakukan oleh siswa dalam menyelesaikan soal Fisika materi Gaya dan Hukum Newton adalah (1) kesalahan konsep (72,22%) berupa kesalahan dalam memahami konsep Gaya dan Hukum Newton, baik pada konsep Gaya maupun Hukum Newton I, II, dan II; (2) kesalahan strategi(68,52%) berupa kesalahan memilih cara yang tidak tepat dalam mengerjakan soal yang disebabkan siswa lupa, kurang teliti, kurang latihan soal, terburu-buru, dan kekurangan waktu (3) kesalahan terjemahan (62,96%) berupa kesalahan dimana subjek tidak dapat menerjemahkan maksud soal secara tepat, yang disebabkan siswa lupa, tidak memahami simbol Fisika dari data-data yang disebutkan pada soal, dan kurang teliti dalam membaca serta memahami maksud soal; (4) kesalahan hitung (37,04%) berupa kesalahan dalam melakukan operasi hitung, yang disebabkan karena tidak teliti dalam melakukan penjumlahan, pengurangan, perkalian ataupun pembagian.

Kata Kunci: analisis, jenis kesalahan siswa, kesalahan menyelesaikan soal, Gaya, Hukum Newton

ABSTRACT

Fitria Ayu Wulandari. **ANALYSIS OF MISTAKES IN SOLVING PHYSICS PROBLEMS OF FORCE AND NEWTON'S LAW SUBJECT FOR EIGHT GRADE JUNIOR HIGH SCHOOL ISLAM AL-HADI.** Thesis, Faculty of Teacher Training and Education Sebelas Maret University. April. 2016.

The objectives of this study are to describe: (1) the mistake types done by Grade VIII students of SMP Al Hadi in solving physics problems on Force and Newton's Law, (2) factors causing mistake done by Grade VIII students of SMP Al Hadi in solving physics problems on Force and Newton's Law,

The research included a qualitative descriptive research. The research was conducted at SMP Al Hadi and the subjects were students of class VIII A and VIII E consists of 26 students for each class. The sampling technique used were purposive sampling. The research used observation, test, and interview technique for collecting the data. Data validation was conducted through data triangulation by comparing the observation data of learning activity, student tests sheets, and interviewing with students.

Based on the data analysis, the types of mistake and cause of mistake made by students in solving Physics problems of Force and Newton's Law subject are:(1) misconception, (72.22%) that is an error in understanding the concept of Force and Newton's Laws I, II, and III; 2) strategic mistake (68.52%) is mistake on using data and determine step to solve problems, was caused students were forget, less accurately, less exercises on problems solving, less variation of exercises on problems solving, in a hurry, and time lack; (3) translation mistake (62.96%) is a mistake to write data that known and question on problem to Physics symbol, comprehend purpose problem, and write data that known correctly, was caused students were forget, did not comprehend in Physics symbol of data that mentioned on problems, misinterpreted the problems purpose, and less accurately to read and comprehend the problem purpose; (4)calculation mistake (37.04%) is mistake on calculating, was caused students less accurately in calculate and in a hurry on problems solving.

Keywords: *analysis, student's mistake types, mistake in solving problems, Force, Newton's Law*